that the meteor was 46 miles away when first seen, and when moving in a path almost perpendicular to the line of sight, the tangent of 19° on a radius of 46 being about 16, we must conclude that the velocity of the meteor when first seen was about 16 miles per second.

The meteor passed from my latitude to the horizon in an estimated 10 seconds. *It surely passed Mobile long before it reached my horizon.* Mobile, from my point of observations, bears S. 5° 03′ W., distant 127 miles. From the point 6 miles east of Uniontown, Ala., Mobile bears S. 16° 42′ W., distant 129 miles (this is taking no account of the spherical form of the earth), and in its passage from this last point to the latitude of Mobile, with the assumed velocity, the meteor would have consumed only about 8 seconds. An object only 2 miles above Mobile would have been in my horizon.

After the disappearance of the meteor my first thought was to get a lamp and note the time. I had thought of listening for a sound, but at the moment it did not occur to me that I would have to wait probably from three to five minutes for the sound to get to me; so I heard none.

When the direction of the disappearance was taken the variation of vernier of the instrument was set for 4° 30′ E. That is to say, my assumed meridian ran N. 4° 30′ W. of the magnetic.

Note of July 7, 1916.—Shortly after the appearance of this meteor I was in *Faunsdale, Ala.*, a place 16 miles east of my point of observation, and from what I could learn it does not seem that the apparent position of the meteor as seen from that place, was different from that of my observation. I did not have the opportunity, however, of consulting one gentleman who is said to have had a good view of it while sitting on his front porch. His front porch faces due east.

WORK OF THE AMERICAN METEOR SOCIETY IN 1914 AND 1915.[1]

By CHARLES P. OLIVIER.

[Dated: Leander McCormick Observatory, University of Virginia.]

The year 1915 saw a very great increase in the interest in the study of meteors, which was evidenced by the large number of observations made by members of the American Meteor Society. This gratifying increase became largely possible on account of a grant to Dr. S. A. Mitchell, of the Leander McCormick Observatory, from the J. Lawrence Smith fund of the National Academy of Sciences. This appropriation, which was made in April, 1915, permitted the work of the Meteor Society to obtain wider publicity by the publication and distribution of bulletins, maps, and blanks to prospective members.

As a consequence it is believed that the largest amount of systematic work ever done in one year in America was sent in; the results of these observations have been prepared for publication and are now awaiting printing. Briefly, this publication will contain the results from 540 observations made by 4 persons in 1914 and from 5,003 observations made by 36 persons in 1915. While most of these 36 persons are amateurs, 5 have had astronomical training, one is a colonel in the United States Army, one is an observer of meteors in the United States Weather Bureau of wide experience, three are students in astronomy at the University of Virginia, and several others are trained in various scientific lines which would make their work the more valuable. The observers were stationed in 17 States, two Provinces of Canada, and one in the Argentine Republic. It might be added that the Meteor Society has members in several foreign countries and several dozen more in America from whom no reports have yet been received, while a week rarely passes without a new person applying for membership.

From the 5,543 observations of meteors mentioned we have been able to deduce 139 radiants of sufficient accuracy to calculate parabolic orbits for the meteor streams they represent. These orbits are contained in full in one of the tables. Following this is a table containing 81 less certain, but probably existant radiants, for which as yet no orbits are calculated. Other tables contain analyzed data of the distribution of meteors as to magnitudes and average durations of their times of visibility. There is also a table containing a few real heights, which were obtained in August, 1915, between Richmond, Va., University of Virginia, and Washington, D. C. This latter work we hope to repeat on a larger scale and under better conditions during the summer of 1916. The text of the publication contains details as to the organization, plans, and methods of reduction of the work. It further contains full explanations as to the derivation and use of the figures found in the tables. Actual directions to the members were omitted, since these had been printed at great length both in "Popular Astronomy" and also in Bulletins 2–5 of the Meteor Society, which were distributed to all members and applicants.

The present publication and the two similar ones previously prepared by me will bring up the number of results to 440 parabolic orbits of meteor streams, based on about 14,000 meteors. The peculiar value of this contribution lies in the fact that a fairly uniform plan has been followed by all the observers, and that the results were computed and deduced by one person using the methods and care with which other astronomical work is handled in all regular observatories.

It may be of interest to mention the various methods used to reach amateurs who might care to join in the work. At the very organization of this society, the cooperation of the members of the Meteor Section of the Society for Practical Astronomy was secured by the appointment of the writer as director of the latter. Then, last spring a number of articles were published by Dr. S. A. Mitchell and myself calling attention to the desirability of cooperation on the part of all amateurs. These articles appeared in the "Scientific American," "Journal of the Royal Astronomical Society of Canada," and "Popular Astronomy;" by reprinting them in part or in whole, the press of the country assisted in bringing our work to the notice of amateur observers and, as a result, wide publicity was secured. Not less than 200 people have written letters on the subject to date, over half desiring to join in making observations. It goes without saying that many have never been heard from again, but so many have worked with real enthusiasm and success, that it would seem that the future of meteoric astronomy is brighter at the present time than ever before, so far as America is concerned. This is peculiarly fortunate at such an epoch when similar societies in Europe must be greatly reduced in membership and activity.

Having secured the approbation and support of the National Academy of Sciences for the coming year, through a further grant from the J. Lawrence Smith fund, it is hoped that the results for 1916 will surpass those for the previous year, and indeed a good start has been made in that direction. We still need and desire the help of other persons interested in such work and a cordial invitation is again extended to them.

[1] *Reprinted from* Proc. Natl. Acad. Sci., Washington, July, 1916, 2: 372-4.